Fundamental Animal Science

Career Cluster	Agriculture, Food and Natural Resources
Course Code	18101
Prerequisite(s)	Recommended: Introduction to AFNR
Credit	0.5
Graduation Requirement	No
Program of Study and Sequence	Foundation course – Cluster course – **Fundamental Animal Science** – Advanced Animal Science and/or Ag Biotechnology
Student Organization	National FFA Organization
Coordinating Work-Based Learning	Job shadowing, mentoring, internships, entrepreneurships, service learning, workplace tours, apprenticeship, school-based enterprises, Supervised Agricultural Experience (SAE)
Industry Certifications	OSHA 10 Hour Safety Certification (Agriculture or General Industry), National Career Readiness Certificate (NCRC), Beef Quality Assurance, Youth Beef Quality Assurance, Youth Beef Industry Food Safety, Youth Dairy Animal Care and Quality Assurance, Youth Humane Equine Management, Youth Pork Quality Assurance
Dual Credit or Dual Enrollment	
Teacher Certification	Agriculture Education
Resources	

Course Description:

Fundamental Animal Science will address the basic knowledge and skills necessary to care for and meet the needs of animals, along with soft skills necessary for careers in the Agriculture, Food and Natural Resources sector. Topics addressed in the course include: animal anatomy and physiology, animal health, safely working with animals, animal nutrition, reproductive systems, animal performance, animal industry issues, and employability. Utilizing appropriate equipment and technology should enhance classroom and laboratory content. Algebra, English, Biology and human relations skills will be reinforced in the course. Work-based learning strategies appropriate for this course are school-based enterprises and field trips. This class is reinforced through the FFA and Supervised Agricultural Experience (SAE) activities such as the Livestock Evaluation Career Development Event and related Proficiency Awards. Each student will be expected to maintain a SAE.

Program of Study Application:

Fundamental Animal Science is a first pathway course in the Agriculture, Food and Natural Resources Program of Study, Animal Systems pathway. Fundamental Animal Science is preceded by a Cluster course and is recommended to be taken prior to participation in Advanced Animal Science or Ag Biotechnology.

Course Standards

AN 1 Examine animal anatomy and physiology

Webb Level	Sub-indicator	Integrated Content
One Recall	AN 1.1 Recognize animals by species, gender or use.	
One Recall	AN 1.2 Identify the parts of an animal's anatomy.	

Notes

AN 2 Examine animal health

Webb Level	Sub-indicator	Integrated Content
Two Skill/Concept	AN 2.1 Evaluate a subject animal to determine the nature of its health.	Diseases
One Recall	AN 2.2 Understand proper usage and effects of animal health products.	Compare treatment options

Notes

AN 3 Describe practices for safely working with animals

Webb Level	Sub-indicator	Integrated Content
One Recall	AN 3.1 Judge an animal's behavior to safely work with it.	
Two Skill/Concept	AN 3.2 Examine animal housing, equipment and handling facilities for the safety of animals and handlers.	
Two Skill/Concept	AN 3.3 Select management practices to reduce the effects of animal production on the environment.	

Notes

AN 4 Distinguish elements of proper animal nutrition.

Webb Level	Sub-indicator	Integrated Content
Two Skill/Concept	AN 4.1 Compare an animal's differing nutritional needs throughout its life cycle.	
One Recall	AN 4.2 Prepare a feed ration to fulfill a given animal's nutrient requirements.	

Notes

AN 5 Study the reproductive system of animals.

Webb Level	Sub-indicator	Integrated Content
One Recall	AN 5.1 Examine male and female reproductive systems.	
One Recall	AN 5.2 Discuss reproductive cycles and breeding techniques.	
Two Skill/Concept	AN 5.3 Evaluate an animal to determine breeding soundness and readiness.	

Notes

AN 6 Identify factors that affect an animal's performance.

Webb Level	Sub-indicator	Integrated Content
Two Skill/Concept	AN 6.1 Predict genetic outcomes.	
Two Skill/Concept	AN 6.2 Determine optimum performance levels for a given animal species.	
Two Skill/Concept	AN 6.3 Assess an animal to determine if it has reached its optimum performance level.	

Notes

AN 7 Examine animal industry issues.

Webb Level	Sub-indicator	Integrated Content
Two Skill/Concept	AN 7.1 Compare and contrast consumer concerns related to animal food products.	
Two Skill/Concept	AN 7.2 Analyze consumer concern related to animal welfare.	

Notes

AN 8 Develop employability skills related to the Animal Systems Pathway.

Webb Level	Sub-indicator	Integrated Content
Two Skill/Concept	AN 8.1 Develop soft skills to enhance employability.	

Notes